Can Avascular Necrosis (AVN) Be Reversed?

Understanding AVN Progression & Treatment Options

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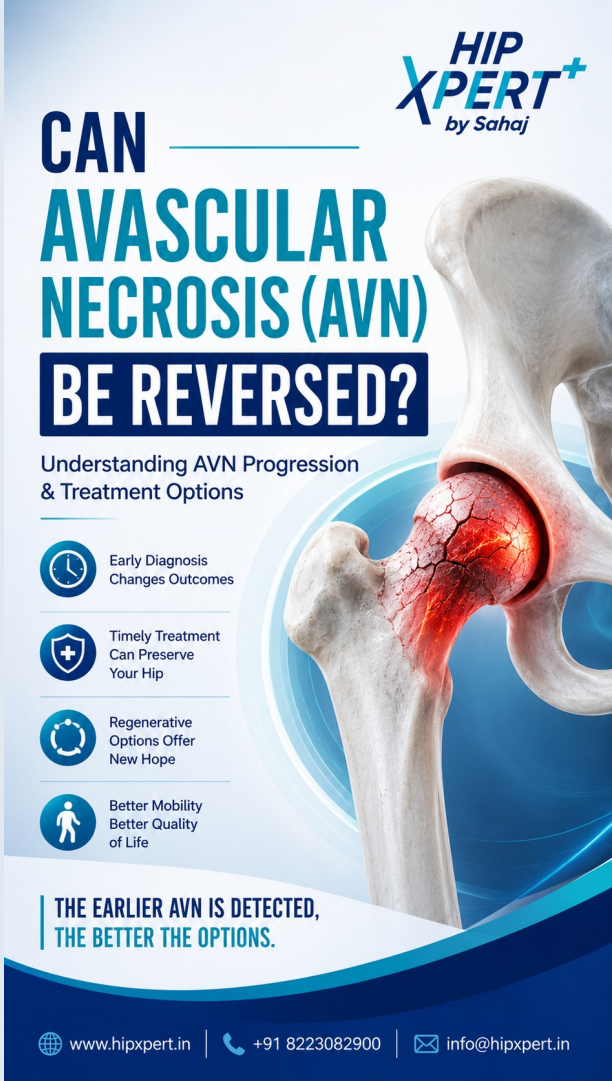
HIP XPERT+ by Sahaj
CAN AVASCULAR NECROSIS (AVN) BE REVERSED?
Understanding AVN Progression & Treatment Options
Early Diagnosis Changes Outcomes
Timely Treatment Can Preserve Your Hip
Regenerative Options Offer New Hope
Better Mobility Better Quality of Life
THE EARLIER AVN IS DETECTED, THE BETTER THE OPTIONS.
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What is Avascular Necrosis (AVN)?

- Condition where **blood supply** to the femoral head is reduced or interrupted.
- Lack of blood flow leads to **bone cell death** and structural weakening.
- Progressive weakening eventually results in **bone collapse**.
- Treatment outcomes are heavily dependent on the **disease stage**.

Blood Supply Interruption

Structural Failure

Can AVN Really Be Reversed?

The Short Answer: It Depends

Disease Stage

Earlier stages offer significantly better reversal potential.

Affected Size

Smaller areas are more likely to respond to treatment.

Bone Damage

Amount of structural damage already present in the joint.

Timing

Speed of intervention after the onset of symptoms.

Early stages offer significantly better opportunities for joint preservation.

Stage 1 AVN: The Optimal Window

KEY FEATURES

- X-ray appears normal
- MRI detects early changes
- No bone collapse present
- Bone structure remains intact

REVERSAL POTENTIAL

- Best stage for intervention
- Highest joint preservation rate
- Maximum potential for reversal

Early diagnosis is critical for successful joint preservation.

Stage 2 AVN: Preservation Still Viable

KEY FEATURES

- Bone changes become **visible on X-ray** imaging.
- **No collapse** of the femoral head has occurred yet.
- Symptoms usually **increase** in intensity and frequency.

POTENTIAL

- **Joint preservation** may still be possible with proper care.
- Early treatment becomes **increasingly important** to prevent progression.

Critical Window

Structural changes are present, but the joint surface remains intact. **Act now to avoid collapse.**

Delaying treatment increases the risk of irreversible progression.

Stage 3 AVN: Early Structural Damage

KEY FEATURES

Early collapse begins: The femoral head starts to lose its spherical shape.

Crescent sign: A subchondral fracture line visible on X-ray or MRI.

Irregular joint surface: The smooth gliding surface of the hip becomes uneven.

POTENTIAL

Complete reversal becomes **difficult** due to structural failure.

Selected cases may still be evaluated for joint preservation

Structural Compromise

The bone structure has started to fail. Preservation is now a race against further collapse.

CRITICAL STAGE

Stage 4 AVN: Advanced Disease

CLINICAL FEATURES

- **Significant collapse:** Extensive structural failure of the femoral head.
- **Joint space narrowing:** Loss of the protective cartilage layer.
- **Secondary arthritis:** Degenerative changes affecting the entire joint.
- **Severe functional loss:** Marked restriction in hip movement and mobility.

Treatment Reality

Reversal is **generally not possible** at this stage. Treatment shifts focus to **restoring function** and **relieving pain**.

The Critical Importance of Early Diagnosis

TIMING CHANGES EVERYTHING

- Detect AVN **before collapse** occurs.
- Improve **treatment planning** and precision.
- Increase chances of **joint preservation**.
- Avoid progression to **advanced stages**.

The Role of MRI

MRI is the **gold standard** for early detection, identifying changes that are invisible on standard X-rays.

Early diagnosis is the single most important factor in saving the natural hip joint.

Regenerative Therapy for Joint Preservation

Adipose-Derived SVF Therapy is an advanced regenerative approach designed to promote biological healing and avoid invasive surgery.

Support Bone Repair

Stimulates the body's natural ability to repair damaged bone tissue in the femoral head.

Improve Blood Supply

Enhances local microcirculation to restore vital nutrients and oxygen to the affected area.

Biological Healing

Focuses on natural joint preservation by promoting the regeneration of healthy bone cells.

MOST RELEVANT IN:

- Stage 1 AVN
- Stage 2 AVN
- Selected Stage 3

Conclusion & Next Steps

- Early diagnosis offers the **greatest treatment opportunities** for joint preservation.
- Delayed diagnosis may lead to **irreversible bone collapse**.
- **Stage-based treatment** is essential for achieving the best clinical outcomes.

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The earlier AVN is diagnosed, the better the options.